

## ANSWERS: Crystal ball questions on Types of Substances

	Type of substances	Type of <b>particle</b> present	The <b>bonding</b> (attractive forces between particles)
gold	metallic, 3D	cations in a sea of delocalised electrons	metallic bond
(C <sub>2</sub> H <sub>4</sub> ) <sub>n</sub> or polythene	molecular	molecules	strong covalent bond between atoms, weak intermolecular force between molecules
PCl <sub>3</sub>	molecular	molecules	strong covalent bond between atoms, weak intermolecular force between molecules
silicon	molecular	molecules	strong covalent bond between atoms, weak intermolecular force between molecules
silica or silicon dioxide or SiO <sub>2</sub>	covalent network, 3D	atoms	strong covalent bond between atoms
MgI <sub>2</sub>	ionic, 3D	oppositely charged ions	ionic bond
ammonia	molecular	molecules	strong covalent bond between atoms, weak intermolecular force between molecules
P <sub>4</sub> O <sub>10</sub>	molecular	molecules	strong covalent bond between atoms, weak intermolecular force between molecules
carbon specifically graphite	covalent network, 3D	atoms	strong covalent bond between atoms
carbon specifically diamond	covalent network, 3D	atoms	strong covalent bond between atoms
AgNO <sub>3</sub>	ionic, 3D	oppositely charged ions	ionic bond
Br <sub>2</sub>	molecular	molecules	strong covalent bond between atoms, weak intermolecular force between molecules
chromium	metallic, 3D	cations in a sea of delocalised electrons	metallic bond
hydrochloric acid	molecular	molecules	strong covalent bond between atoms, weak intermolecular force between molecules
Cl <sub>2</sub> O	molecular	molecules	strong covalent bond between atoms, weak intermolecular force between molecules
KCl	ionic, 3D	oppositely charged ions	ionic bond
candle wax	molecular	molecules	strong covalent bond between atoms, weak intermolecular force between molecules
nitrogen gas	molecular	molecules	strong covalent bond between atoms, weak intermolecular force between molecules
octane	molecular	molecules	strong covalent bond between atoms, weak intermolecular force between molecules